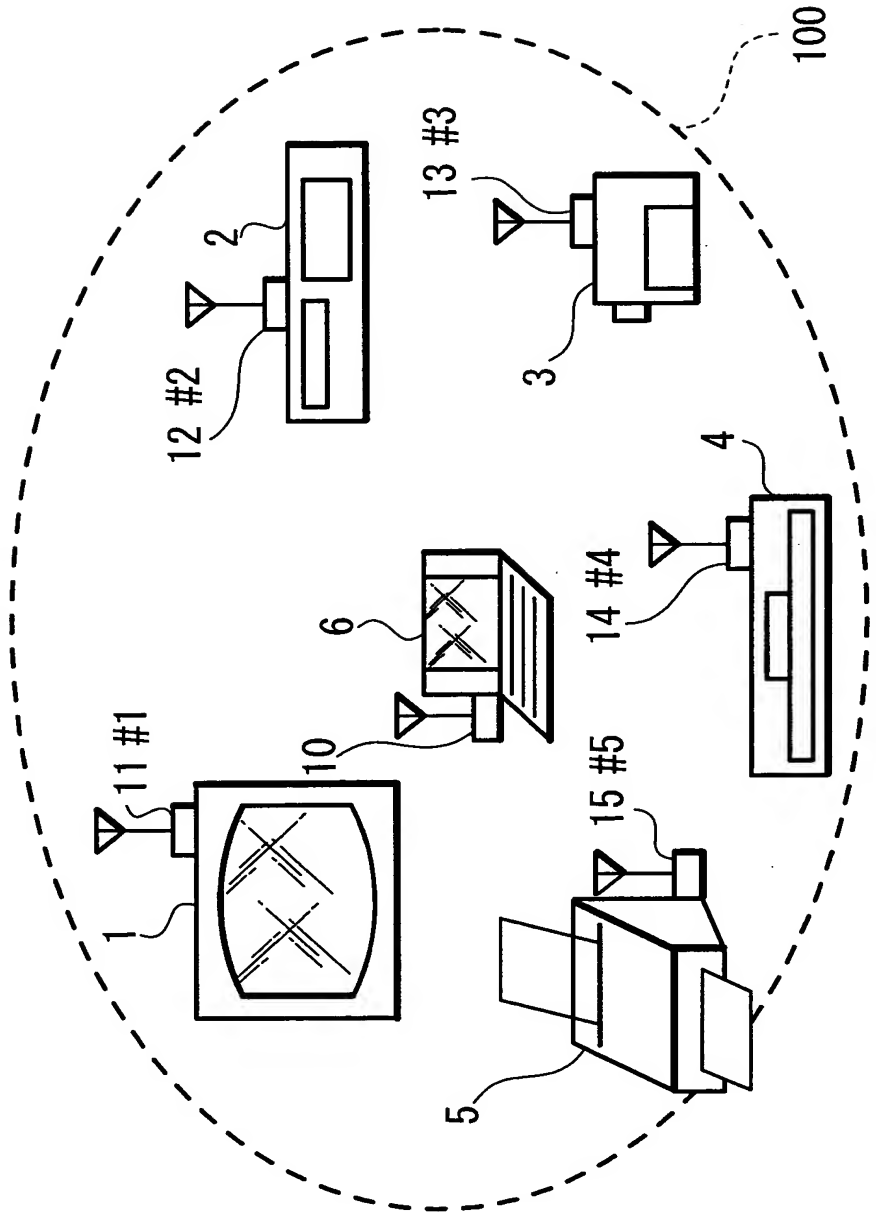


FIG. 1

FIG. 2

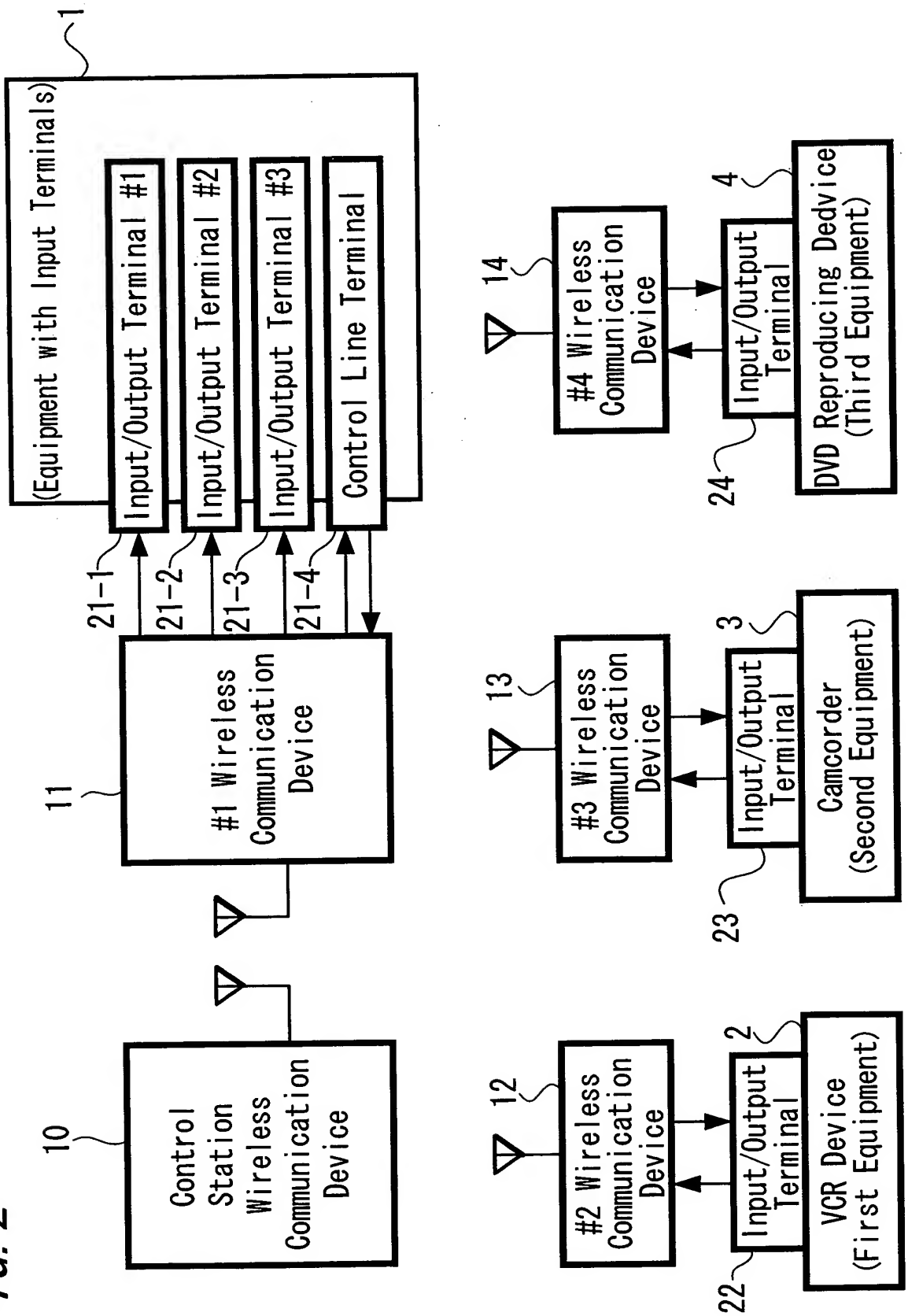
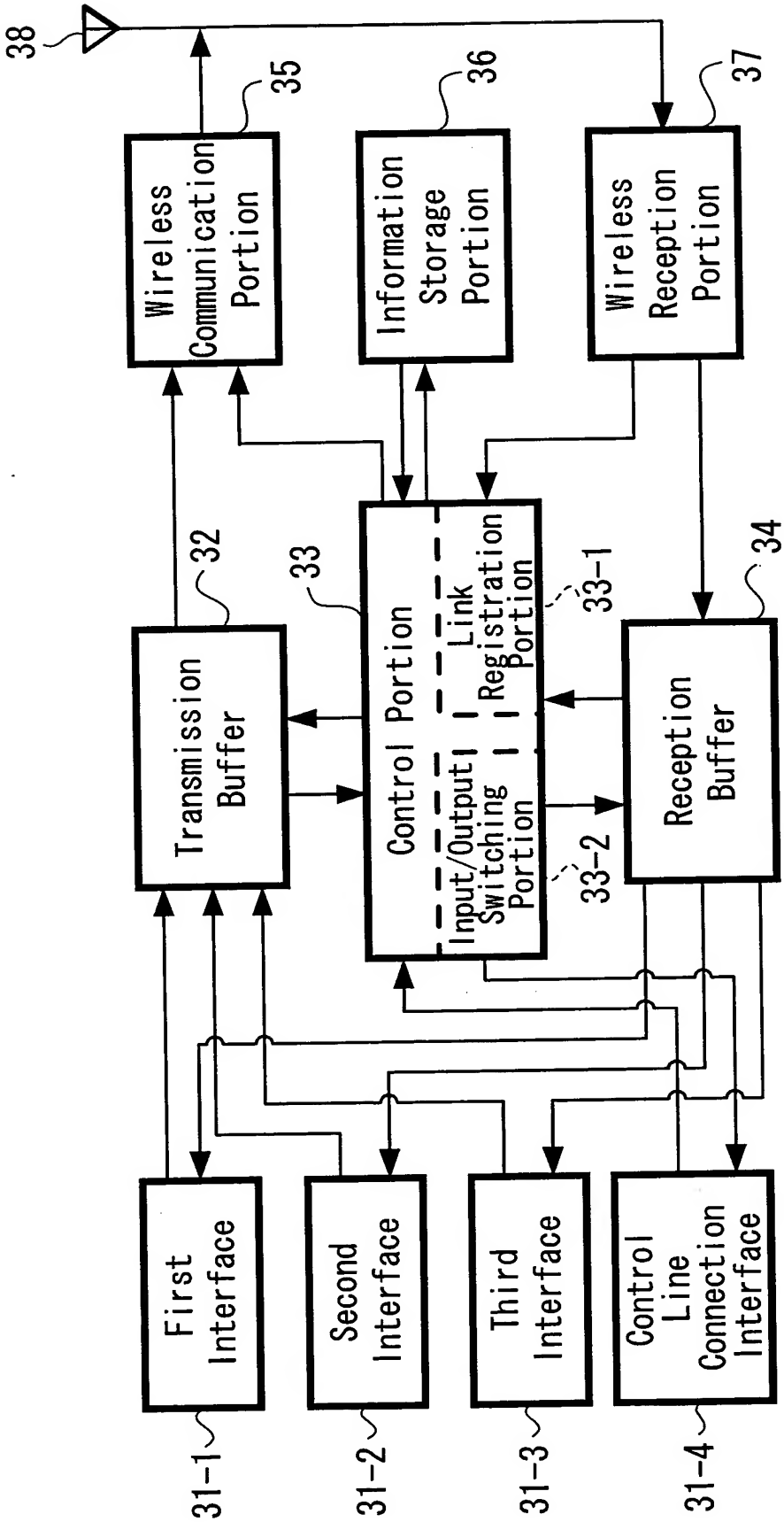

1
(Equipment with Input Terminals)
Input/Output Terminal #1
Input/Output Terminal #2
Input/Output Terminal #3
Control Line Terminal
21-1
21-2
21-3
21-4
11
#1 Wireless Communication Device
10
Control Station Wireless Communication Device
14
#4 Wireless Communication Device
4
Input/Output Terminal
24
DVD Reproducing Dedvice (Third Equipment)
13
#3 Wireless Communication Device
3
Input/Output Terminal
23
Camcorder (Second Equipment)
12
#2 Wireless Communication Device
2
Input/Output Terminal
22
VCR Device (First Equipment)

FIG. 3


38
35
36
37
Wireless Communication Portion
Information Storage Portion
Wireless Reception Portion
32
33
33-1
34
Transmission Buffer
Control Portion
Link Registration Portion
Input/Output Switching Portion
33-2
Reception Buffer
First Interface
Second Interface
Third Interface
Control Line Connection Interface
31-1
31-2
31-3
31-4

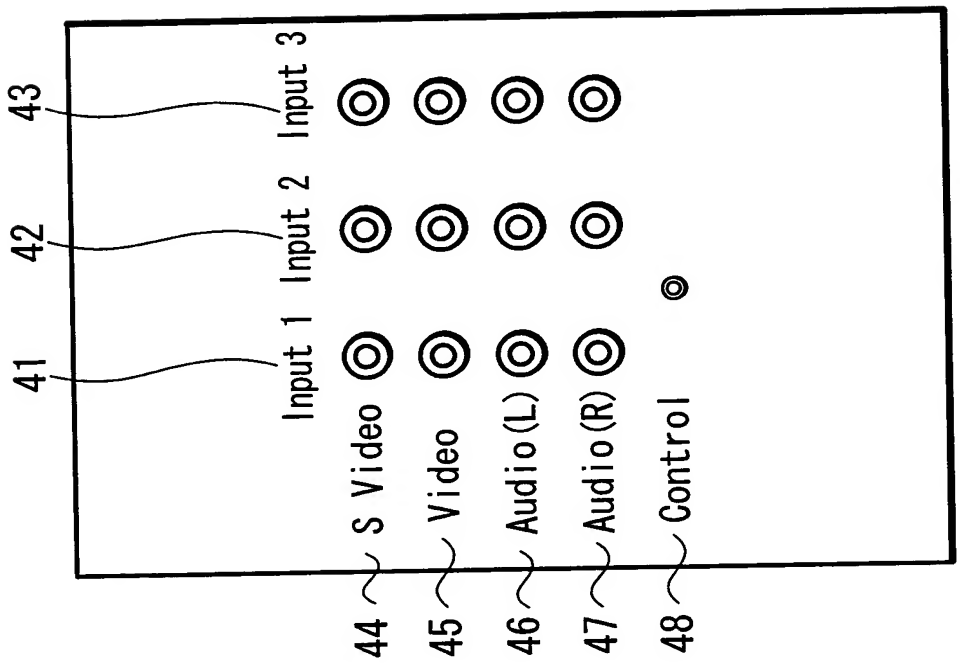

41
42
43
Input 1
Input 2
Input 3
S Video
Video
Audio(L)
Audio(R)
Control
44
45
46
47
48

FIG. 4

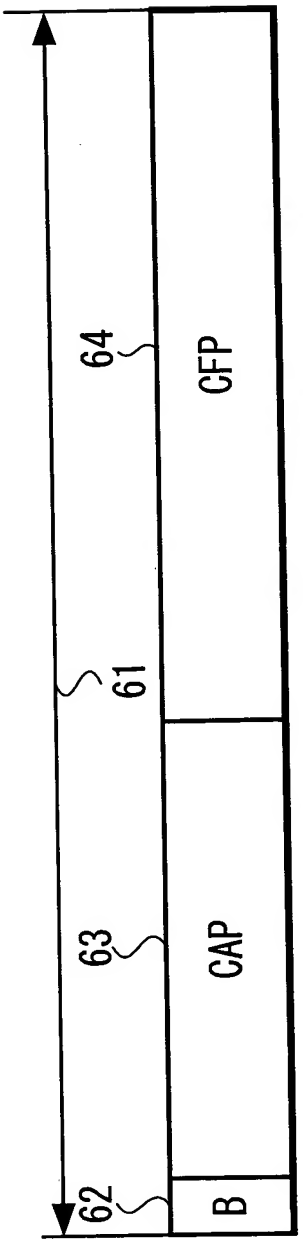

64
CFP
61
63
CAP
62
B

FIG. 6

FIG. 5

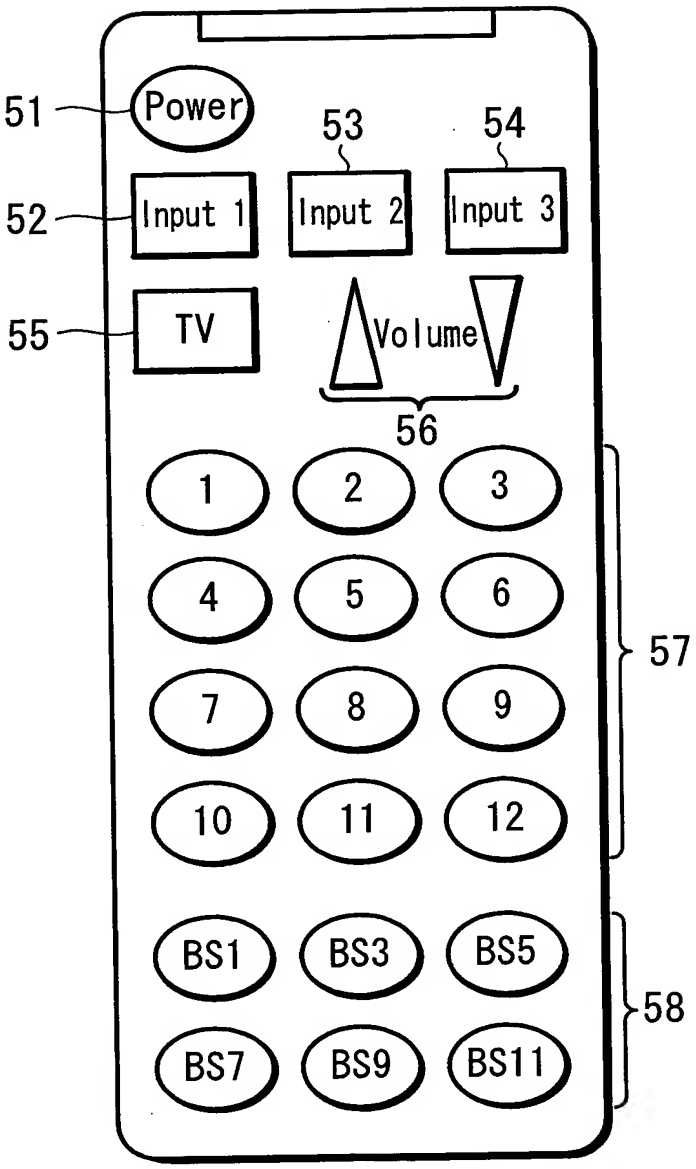

51
Power
53
54
52
Input 1
Input 2
Input 3
55
TV
Volume
56
1
2
3
4
5
6
7
8
9
10
11
12
57
BS1
BS3
BS5
BS7
BS9
BS11
58

FIG. 7

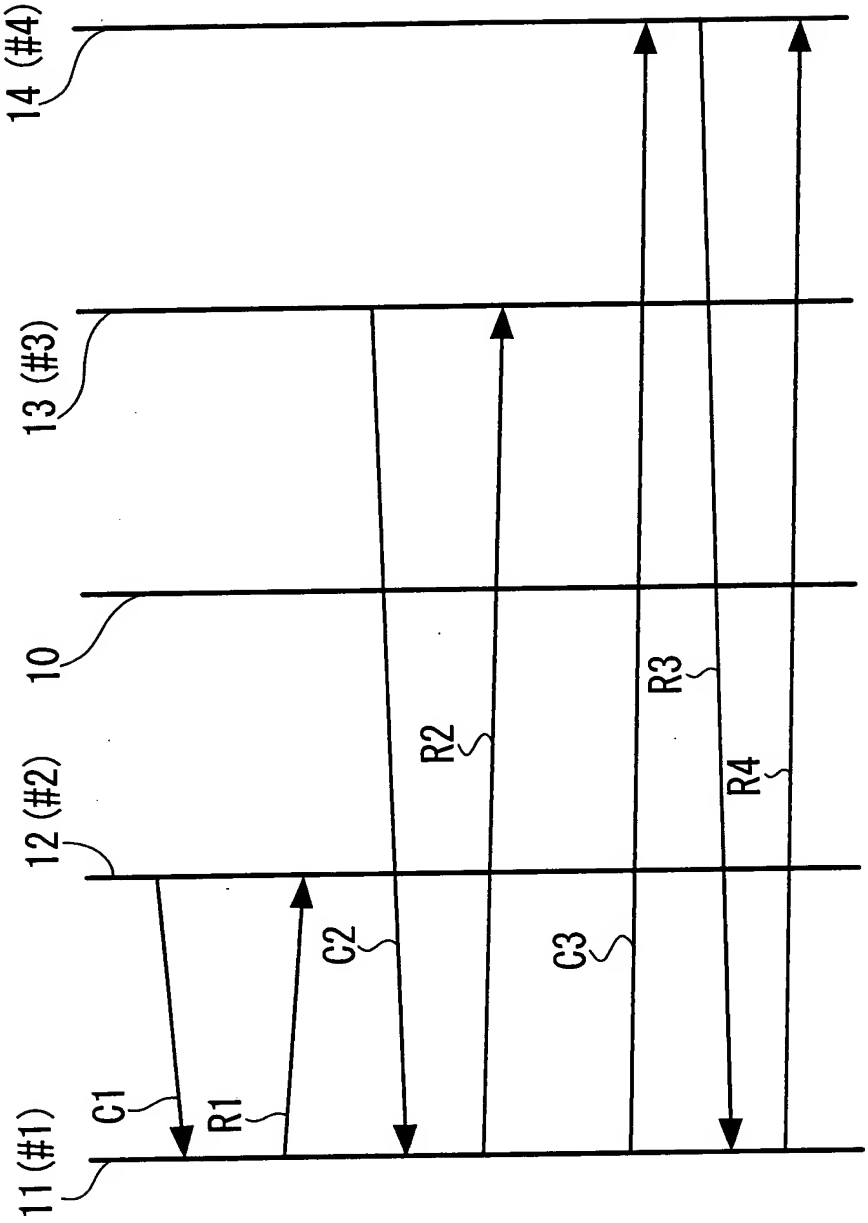


FIG. 8

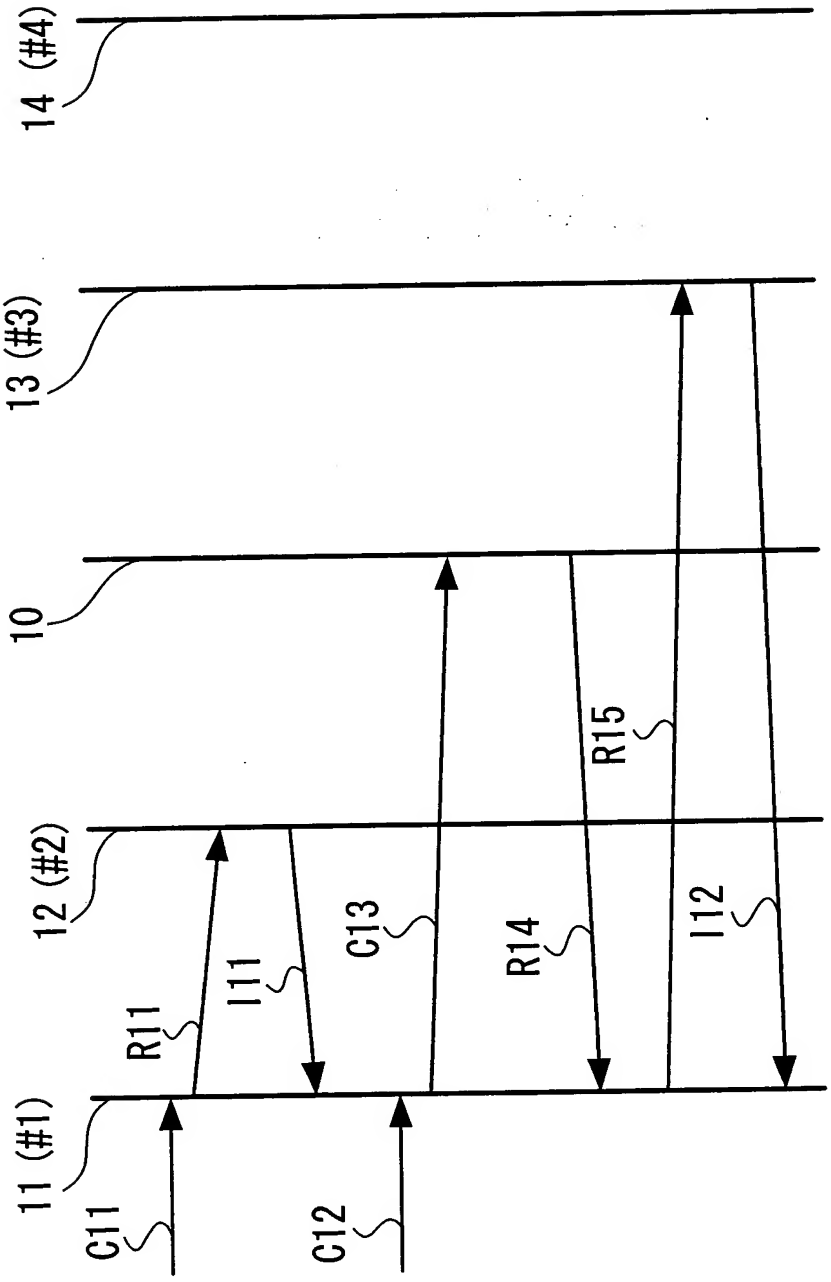
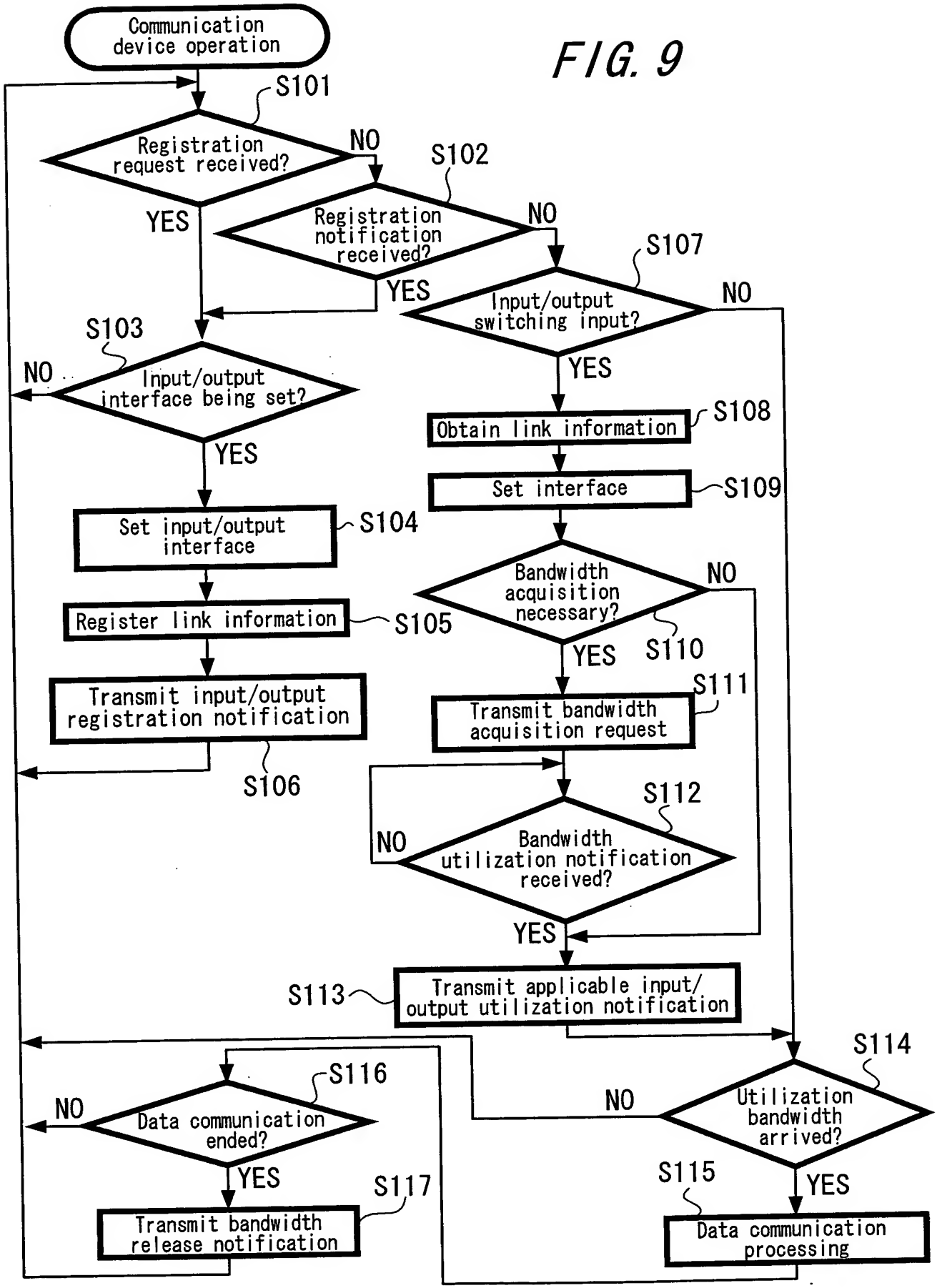


FIG. 9


Communication device operation
S101
Registration request received?
NO
YES
S102
Registration notification received?
NO
YES
S107
Input/output switching input?
NO
YES
S103
Input/output interface being set?
NO
YES
S108
Obtain link information
S109
Set interface
S104
Set input/output interface
S105
Register link information
Transmit input/output registration notification
S106
Bandwidth acquisition necessary?
NO
YES
S110
S111
Transmit bandwidth acquisition request
S112
Bandwidth utilization notification received?
NO
YES
S113
Transmit applicable input/output utilization notification
S114
Utilization bandwidth arrived?
NO
YES
S115
Data communication processing
S116
Data communication ended?
NO
YES
S117
Transmit bandwidth release notification

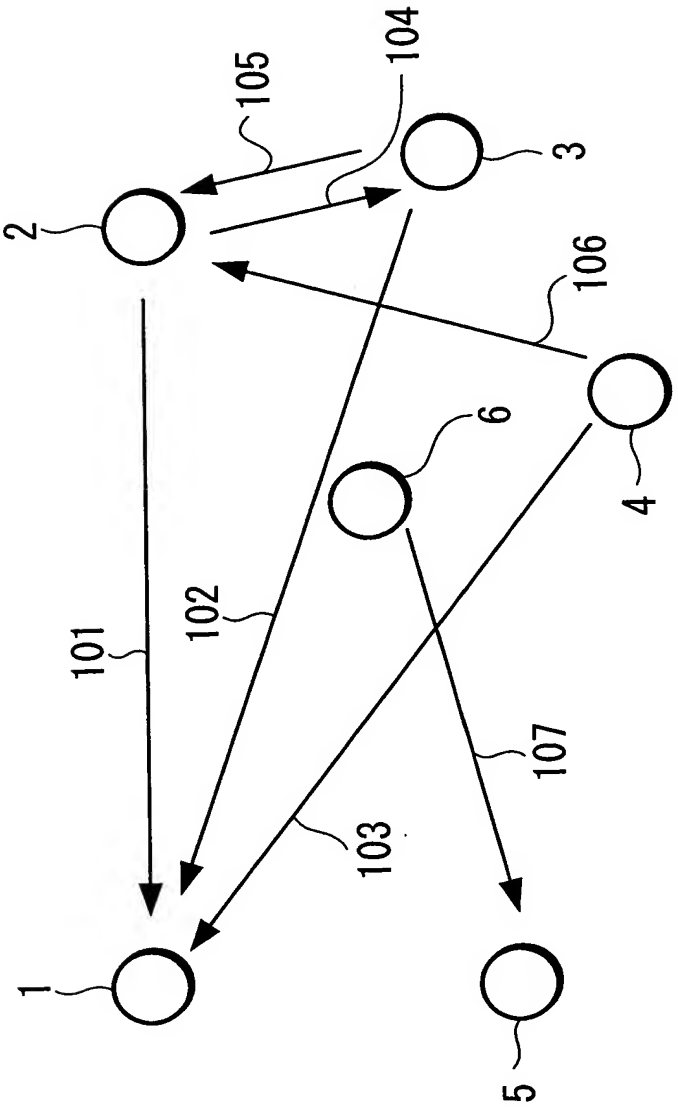


FIG. 10

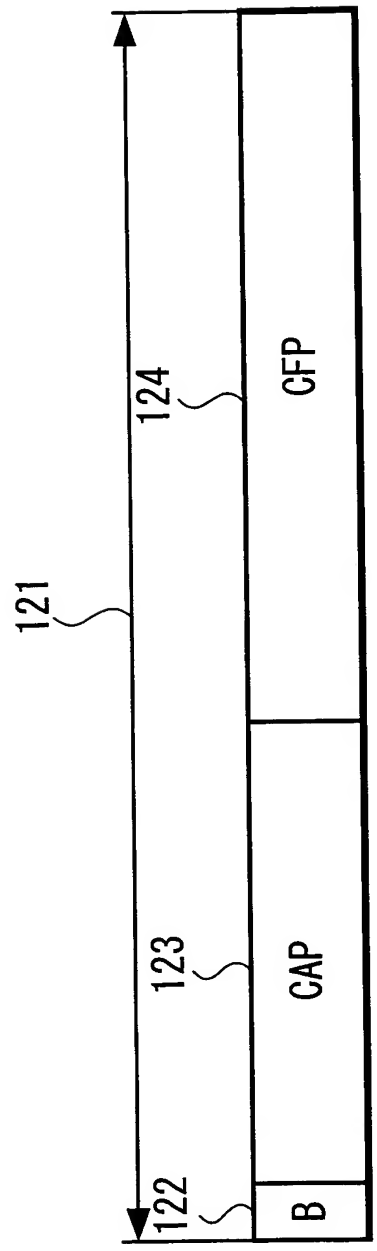


FIG. 12

FIG. 11

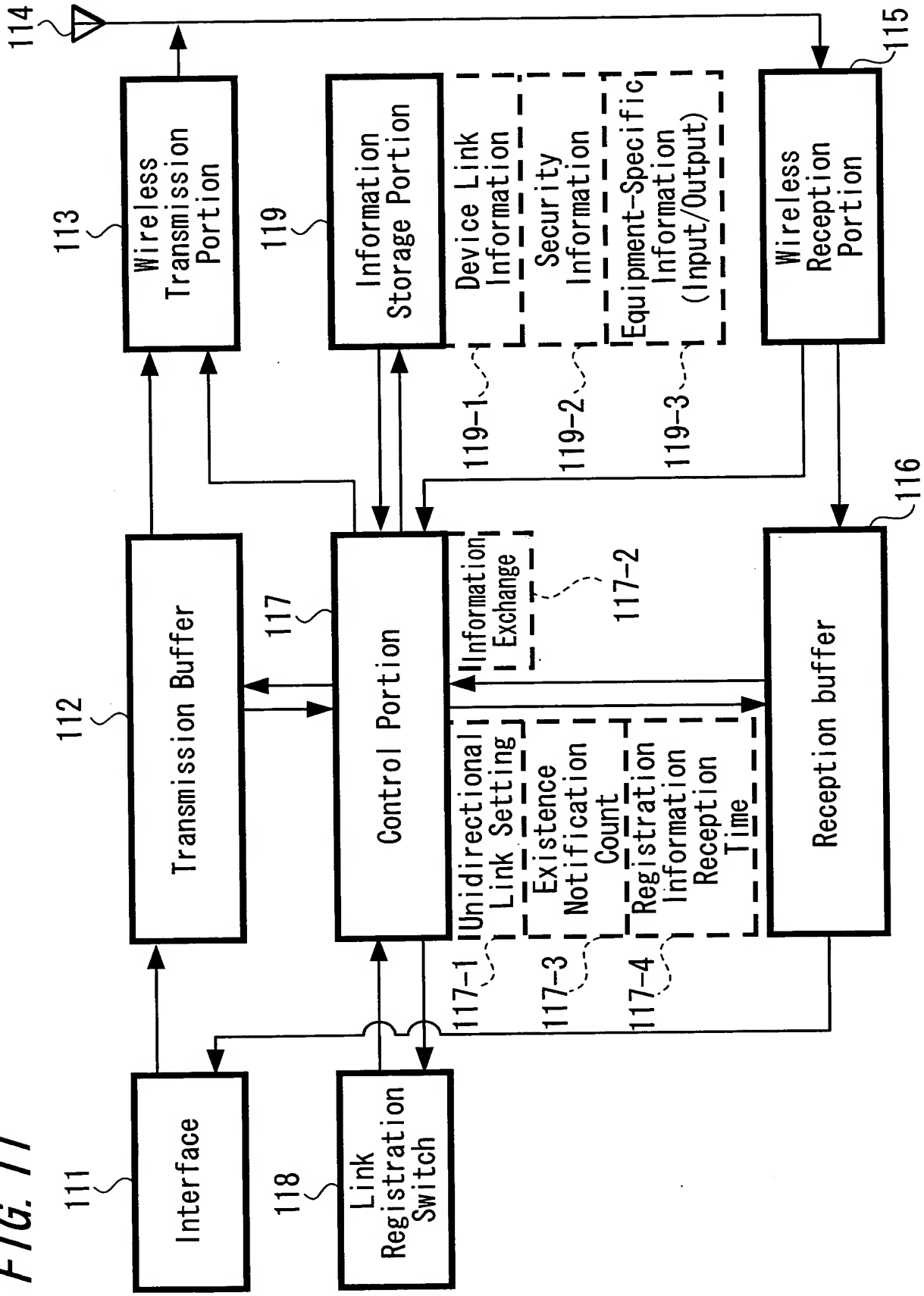
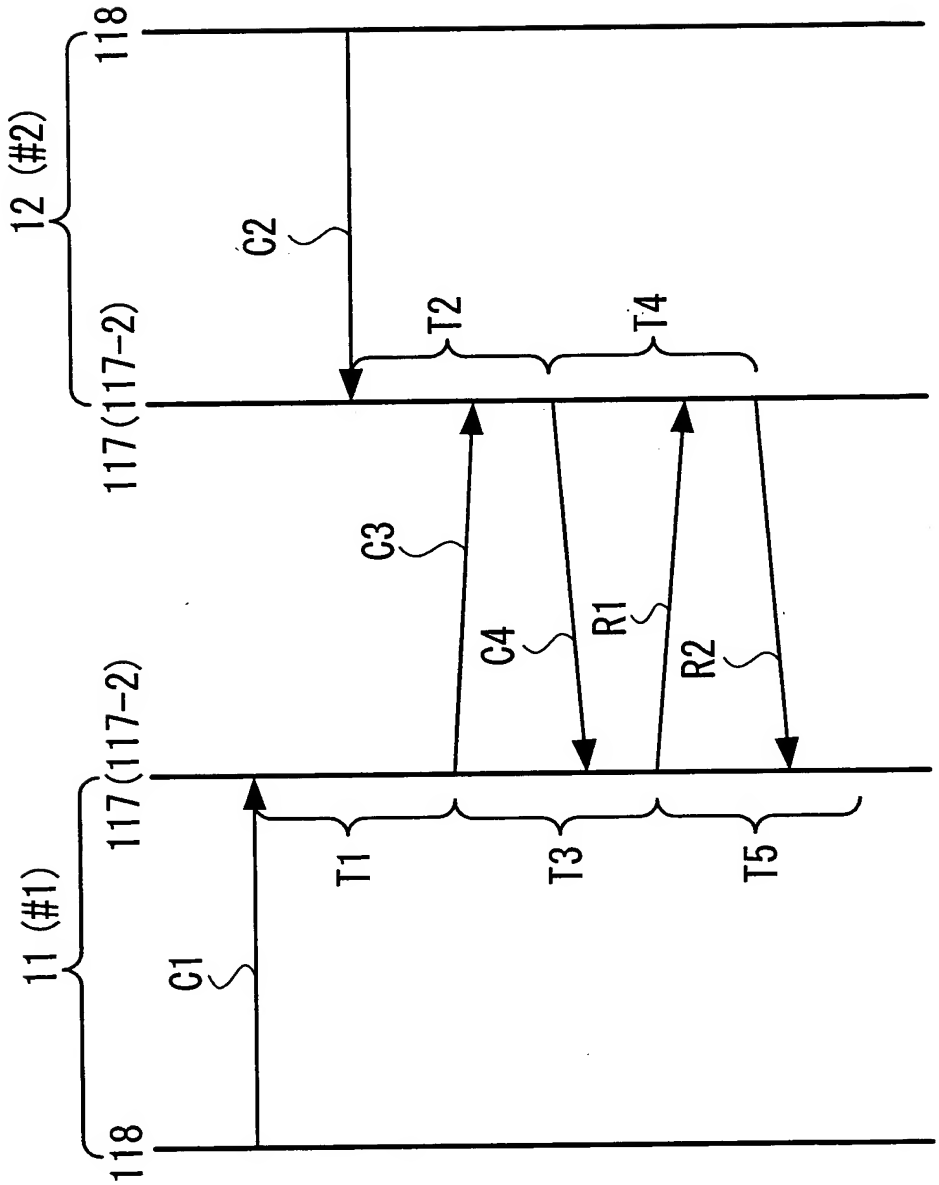

114
115
113
Wireless Transmission Portion
119
Information Storage Portion
Device Link Information
Security Information
Equipment-Specific Information (Input/Output)
Wireless Reception Portion
119-1
119-2
119-3
116
112
Transmission Buffer
117
Control Portion
Information Exchange
117-2
Unidirectional Link Setting
Existence Notification Count
Registration Information Reception Time
Reception buffer
117-1
117-3
117-4
111
Interface
118
Link Registration Switch

FIG. 13



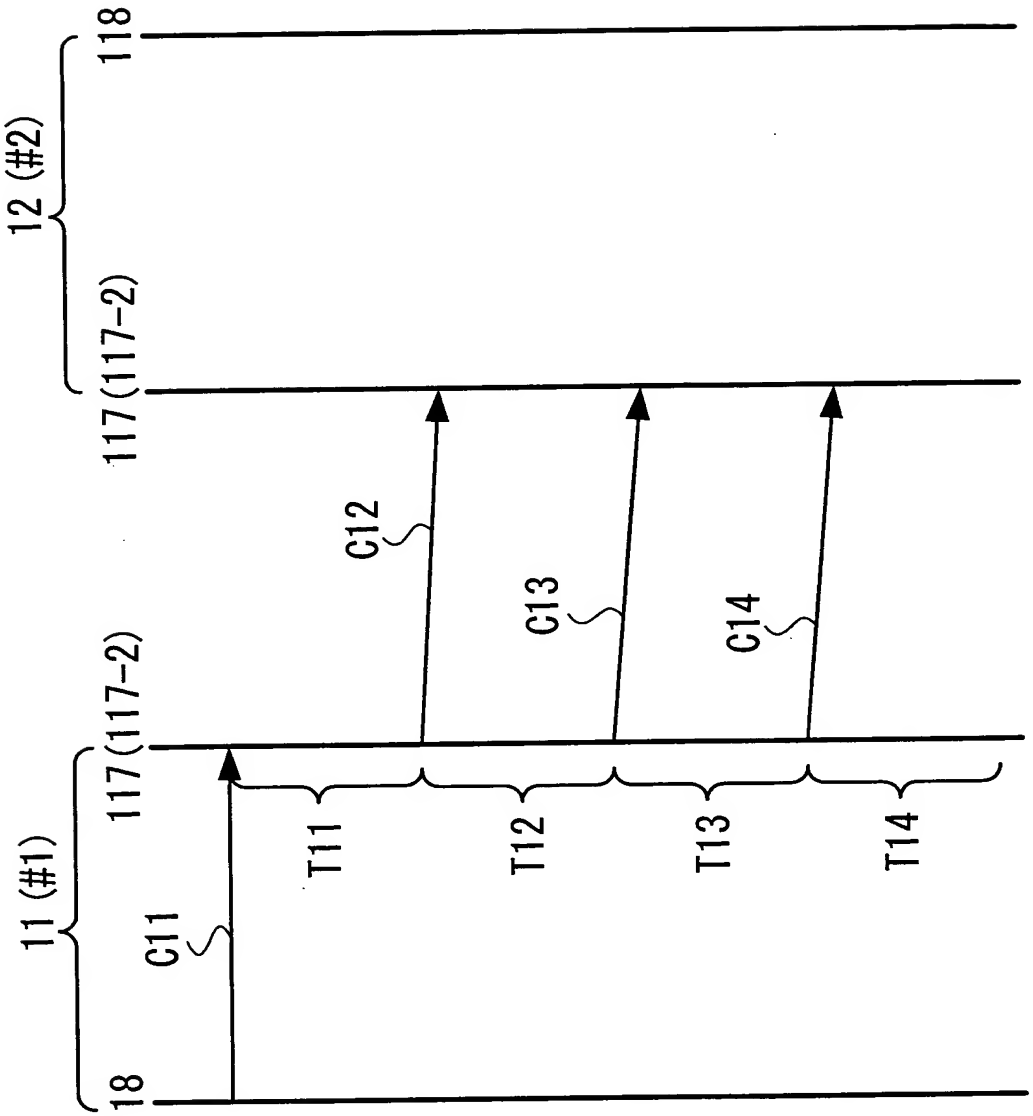

11 (#1)
118
117(117-2)
C11
12 (#2)
117(117-2)
118
C12
C13
C14
T11
T12
T13
T14

FIG. 14

FIG. 15

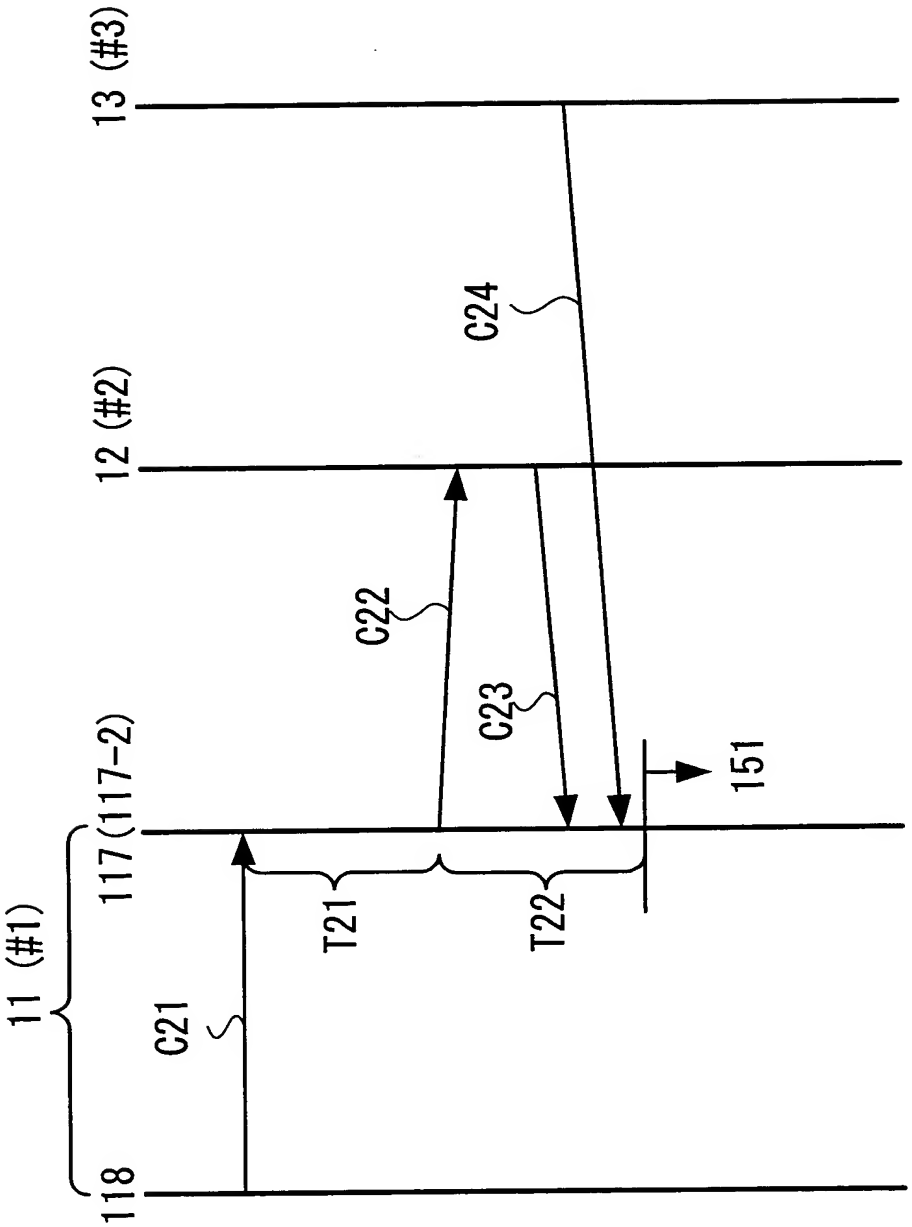


FIG. 16

161
Existence Notification Command Identifier
162
Transmission origin Address (Self-Referencing Device Information)
163
Reception Destination Address (None)
164
Input/Output Link Information Distinction
165
Error Detection Code

FIG. 17

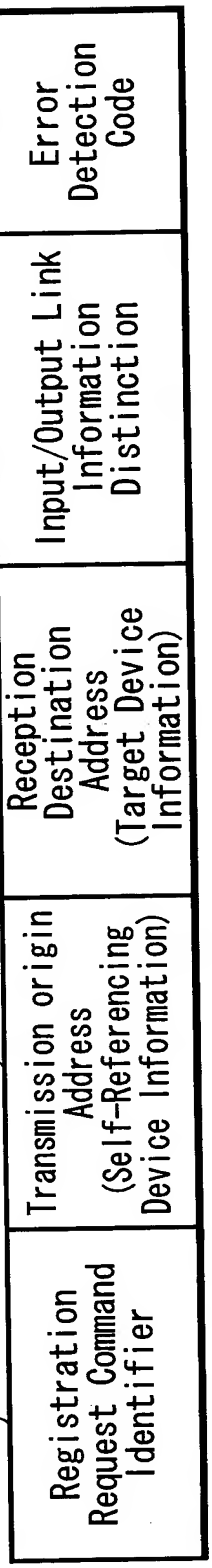

171
Registration Request Command Identifier
172
Transmission origin Address (Self-Referencing Device Information)
173
Reception Destination Address (Target Device Information)
174
Input/Output Link Information Distinction
175
Error Detection Code

FIG. 18

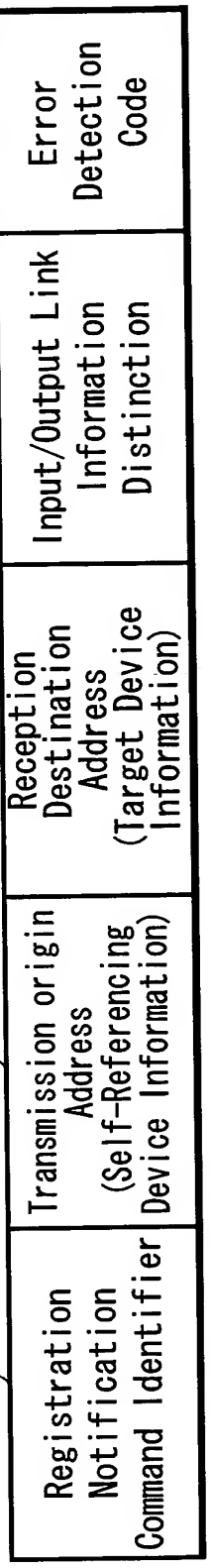

181
Registration Notification Command Identifier
182
Transmission origin Address (Self-Referencing Device Information)
183
Reception Destination Address (Target Device Information)
184
Input/Output Link Information Distinction
185
Error Detection Code

FIG. 19

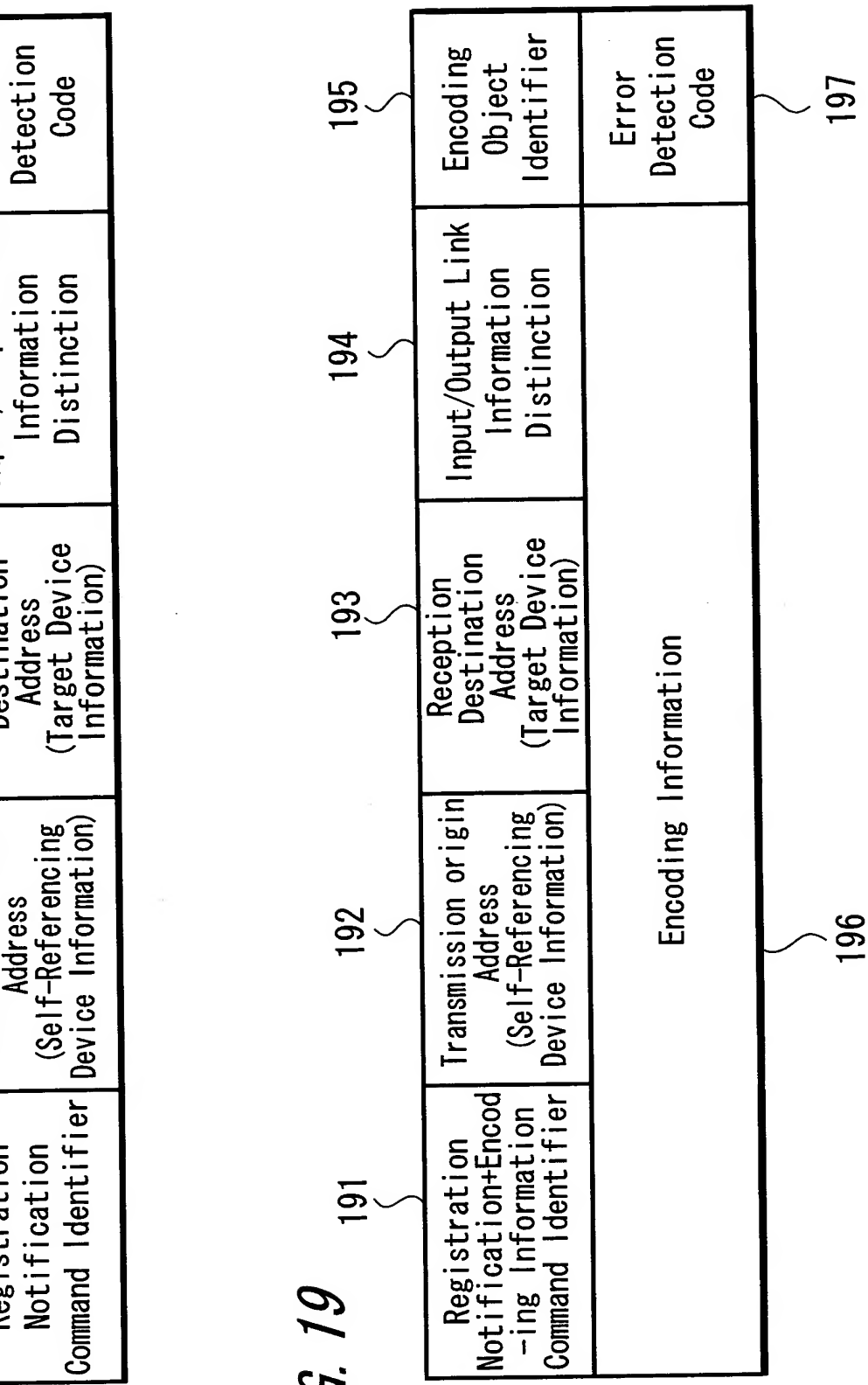
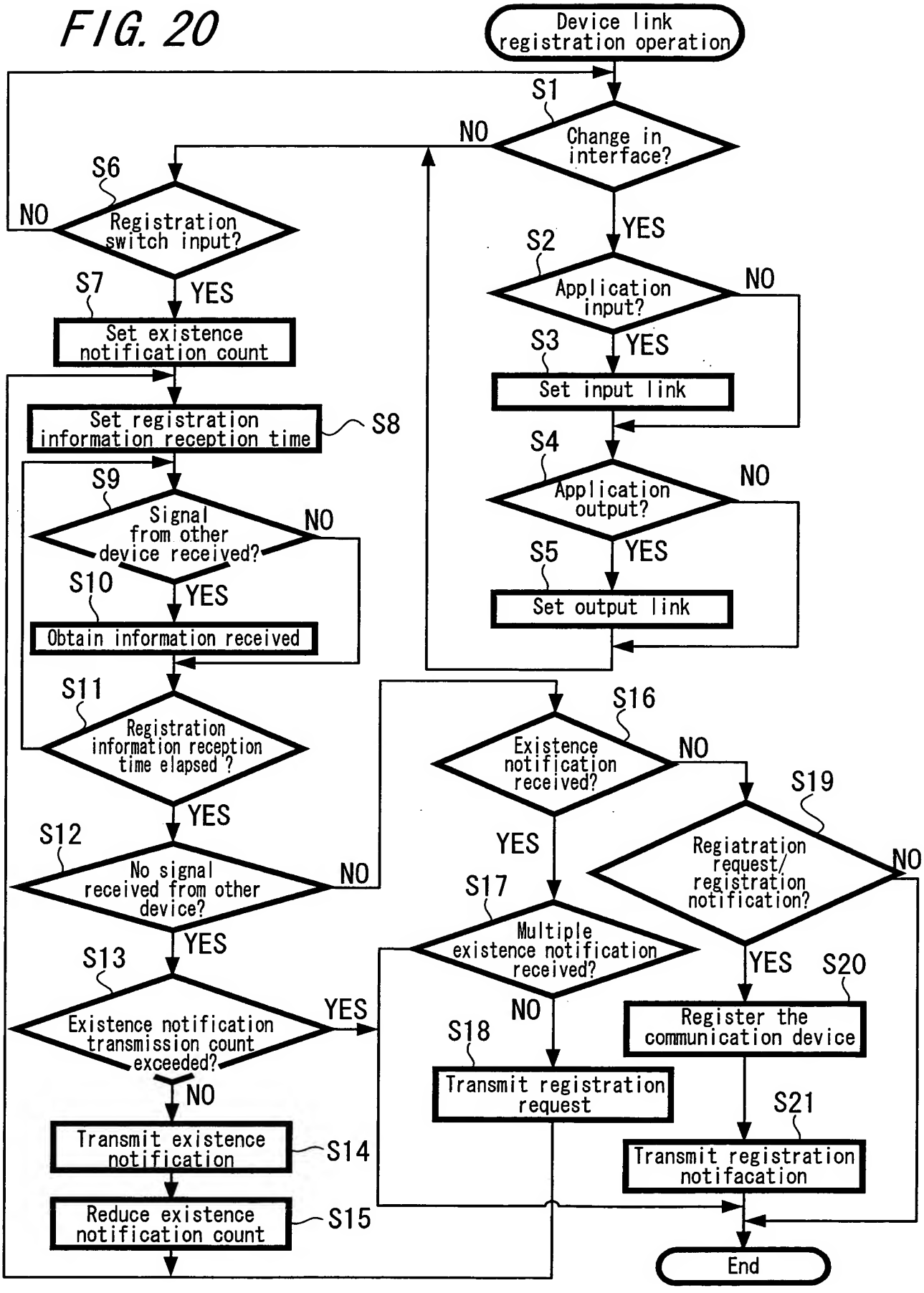

191
Registration Notification+Encoding Information Command Identifier
192
Transmission origin Address (Self-Referencing Device Information)
193
Reception Destination Address (Target Device Information)
194
Input/Output Link Information Distinction
195
Encoding Object Identifier
196
Encoding Information
197
Error Detection Code

FIG. 20


Device link registration operation
S1
Change in interface?
NO
YES
S2
Application input?
NO
YES
S3
Set input link
S4
Application output?
NO
YES
S5
Set output link
S6
Registration switch input?
NO
YES
S7
Set existence notification count
S8
Set registration information reception time
S9
Signal from other device received?
NO
YES
S10
Obtain information received
S11
Registration information reception time elapsed ?
YES
S12
No signal received from other device?
NO
YES
S13
Existence notification transmission count exceeded?
YES
NO
S14
Transmit existence notification
S15
Reduce existence notification count
S16
Existence notification received?
NO
YES
S17
Multiple existence notification received?
NO
S18
Transmit registration request
S19
Regiatration request/ registration notification?
NO
YES
S20
Register the communication device
S21
Transmit registration notifacation
End